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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/826,915	04/06/2001	Noriko Itani	1075.1162	6536

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STAAS & HALSEY LLP  
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1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

SCHLAIFER, JONATHAN D

ART UNIT	PAPER NUMBER
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2178

DATE MAILED: 08/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/826,915

Applicant(s)

ITANI, NORIKO

Examiner

Jonathan D. Schlaifer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This action is responsive to application 09/826,915 filed on 4/6/2001, with no prior art filed.
2. Claims 1-20 are pending in the case. Claims 1, 9, and 16 are independent claims.

#### ***Specification***

3. The disclosure is objected to because of the following informalities: On line 18 of the Abstract, "XML, SGML" should be "XML and SGML".  
  
Appropriate correction is required.

#### ***Claim Objections***

4. Claim 7 objected to because of the following informalities: In line 7, "compressed" should be "compression". Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 11-13 and 22-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The method claims fail to explicitly incorporate a technological means and could, for example, be performed by a human being with pen and paper. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 3, 12, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Fisher et al. (USPN 6,257,128 B1—filing date 4/30/1998), hereinafter Fisher.**
7. **Regarding independent claim 3**, as noted in the rejection to claim 1, in col. 31, lines 30-40 of Fisher tags are stored in a database, which would require units for detecting and replacing them in order to be able to successfully identify and process the tags.
8. **Regarding independent claim 12**, it is the method performed by the apparatus of claim 3, and it is rejected under similar rationale.
9. **Regarding independent claim 15**, it is a computer readable record medium that stores a program for performing the method performed by the apparatus of claim 3, and it is rejected under similar rationale.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 1-2, 11, 14, 17-18, 22-23, and 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koontz (USPN 6,535,886 B1—filing date 10/18/1999), further in view of Fisher.**

**11. Regarding independent claim 1,** Koontz discloses an apparatus for compressing a

plurality of structured documents having a common data structure (in the Abstract, lines 1-10, a segmented data structure is compressed), and also said plurality of compressed documents, which are generated individually from said plural structured documents by said structured document compressing unit, in correspondence with one another (Koontz discloses the use of plural data structures and correspondences in col. 7, lines 50-67).

Koontz fails to disclose that said apparatus comprises: a tag list obtaining unit for obtaining a single tag list, common to said plural structured documents, that lists tags the in the order of appearance; a structured document compressing unit for generating a plurality of compressed documents in which tags in individual said plural structured documents are replaced with predetermined delimiter codes; and an outputting unit for outputting said single tag list, which is obtained by said tag list obtaining unit. However, Fisher discloses that said apparatus comprises: a tag list obtaining unit for obtaining a single tag list, common to said plural structured documents, that lists tags the in the order of appearance (col. 31, lines 20-45, a tag list is managed); a structured document compressing unit for generating a plurality of compressed documents in which tags in individual said plural structured documents are replaced with predetermined delimiter codes (col. 31, lines 30-40, tags are stored in a database, which inherently involves replacement by delimiters); and an outputting unit for outputting said single tag list, which is obtained by said tag list obtaining unit (col. 31, lines 30-40, tags are stored in a database, which inherently involves outputting the tag list to the database). It would have been obvious to one of ordinary skill in the art at the time of the invention to have

incorporated the tag list features of Fisher into the invention of Koontz because it would have provided Koontz's compression program with a way of efficiently and elegantly managing the tags which would have been found in the structured documents of Koontz.

12. **Regarding dependent claim 2**, Koontz fails to disclose an apparatus that further comprises: a tag detecting unit for detecting each tag in individual said structured documents; and a tag replacement unit for replacing said tag, detected by said tag detecting unit, with said predetermined delimiter code. However, as noted in the rejection to claim 1, in col. 31, lines 30-40 of Fisher tags are stored in a database, which would require units for detecting and replacing them in order to be able to successfully identify and process the tags. It would have been obvious to one of ordinary skill in the art at the time of the invention to have stored tags in a database, which would have required detection and replacement of the tags as in Fisher in the context of Koontz in order to successfully identify and process the tags for the purpose of reliable storage.
13. **Regarding independent claim 11**, it is the method performed by the apparatus of claim 1, and it is rejected under similar rationale.
14. **Regarding independent claim 14**, it is a computer readable record medium that stores a program for performing the method performed by the apparatus of claim 1, and it is rejected under similar rationale.
15. **Regarding independent claim 17**, it was notoriously well known in the art at the time of the invention that a compression process can be performed in reverse to result in the complementary decompression process. Since claim 17 claims the complementary decompression process for claim 1, it would have been obvious to one of ordinary skill in

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the art at the time of the invention to reject claim 17 by using a similar rationale to claim 1, performed in reverse.

16. **Regarding independent claim 18**, the limitations of the claim include a tag list holding unit for holding a tag list in which tags in said structured document are listed in the order of appearance, which is inherent to Fisher's tag list, as well as a delimiter code deleting unit for detecting each of the predetermined delimiter codes in said compressed document; and a tag restoring unit for replacing the predetermined delimiter code, detected by said delimiter code detecting unit, with a corresponding tag on said tag list, in accordance with a correspondence between a position of the tag in said tag list and a position of the predetermined delimiter code detected by said delimiter code detecting unit. The latter two limitations are the reverse of claim 2, and are rejected under similar rationale.

17. **Regarding independent claim 22**, it is similar to claim 17 except that it is performed for a plurality of documents, but it was notoriously well known in the art at the time of the invention that any method that can be performed for one document can be performed multiple times to achieve a cumulative effect for a plurality of documents. It would have been obvious to one of ordinary skill in the art at the time of the invention to perform the method of claim 17 multiple times to achieve the method of claim 22, and reject claim 22 under a similar rationale.

18. **Regarding independent claim 23**, it is the method performed by the apparatus of claim 18 and it is rejected under similar rationale.



19. **Regarding independent claim 25**, it is a computer readable record medium that stores a program for performing the method performed by the apparatus of claim 4, and it is rejected under similar rationale.
20. **Regarding independent claim 26**, it is a computer readable record medium that stores a program for performing a subset of the method performed by the apparatus of claim 18, and it is rejected under similar rationale.
21. **Regarding independent claim 27**, it is a computer readable record medium that stores a program for performing the method performed by the apparatus of claim 18, and it is rejected under similar rationale.
22. **Regarding independent claim 28**, it is a combination of the apparatuses of claims 1 and 17, and it would have been obvious to one of ordinary skill in the art at the time of the invention to combine these apparatuses because it was notoriously well known in the art at the time of the invention that compression and decompression apparatuses work in concert to process information for more efficient storage processing.
23. **Regarding independent claim 29**, it is a combination of the apparatuses of claims 2 and 18, and it would have been obvious to one of ordinary skill in the art at the time of the invention to combine these apparatuses because it was notoriously well known in the art at the time of the invention that compression and decompression apparatuses work in concert to process information for more efficient storage processing.
24. **Claims 4, 13, 16, 19, 24, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koontz, further in view of Fisher, further in view of Arnold et al. (USPN 6,745,161 B1—filing date 7/10/2000), hereinafter Arnold.**

25. **Regarding dependent claim 4**, Koontz and Fisher disclose (as noted in the rejection of claim 2): a tag detecting unit for detecting each tag in individual said structured documents; and a tag replacement unit for replacing said tag, detected by said tag detecting unit, with said predetermined delimiter code. They fail to disclose a subdocument extracting unit for extracting a subdocument, which is a region sandwiched between a start tag and an end tag that have a predetermined element name, from said structured document. However, Arnold discloses in col. 5, lines 10-25, extraction of subordinate pieces of information from documents, which is analogous to subdocuments. It would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated Arnold's use of subordinate pieces of information into Koontz and Fisher because it would have allowed the user to have finer control over which specific subregions of documents would be processed in which way.
26. **Regarding independent claim 13**, it is the method performed by the apparatus of claim 4, and it is rejected under similar rationale.
27. **Regarding independent claim 16**, it is a computer readable record medium that stores a program for performing the method performed by the apparatus of claim 4, and it is rejected under similar rationale.
28. **Regarding independent claim 19**, the limitations of the claim include a tag list holding unit for holding a tag list in which tags in said structured document are listed in the order of appearance, which is inherent to Fisher's tag list, and the other limitations of the claim are directed to an apparatus which operates in reverse of the apparatus of claim 4, and is rejected under similar rationale in the manner of claim 17.

29. **Regarding independent claim 24**, it is the method performed by the apparatus of claim 19 and it is rejected under similar rationale.
30. **Regarding independent claim 30**, it is a combination of the apparatuses of claims 4 and 18, and it would have been obvious to one of ordinary skill in the art at the time of the invention to combine these apparatuses because it was notoriously well known in the art at the time of the invention that compression and decompression apparatuses work in concert to process information for more efficient storage processing.
31. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher, further in view of Hind et al. (USPN 6,463,440 B1—filing date 4/8/1999), hereinafter Hind.**
32. **Regarding dependent claim 5**, Fisher fails to disclose an apparatus further comprising an attribute-bearing-tag discriminating unit for discriminating whether or not said tag detected by said tag detecting unit is an attribute-bearing-tag, which has an attribute value; and an attribute-bearing-tag replacement unit for replacing said attribute-bearing-tag, discriminated by said attribute-bearing-tag discriminating unit, with a set of the attribute value and a predetermined delimiter code. However, in col. 9, lines 30-50 of Hind, Hind discloses that the invention is able to identify attributes and process them to replace them with delimiters. It would have been obvious to one of ordinary skill in the art at the time of the invention to have identified attributes and processed them to replace them with delimiters in the manner of Hind in the context of Fisher in order to store characteristics of a style sheet successfully (see col. 9, lines 30-35 of Hind).

- 33. Claims 6 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koontz, further in view of Fisher, further in view of Hind et al. (USPN 6,463,440 B1—filing date 4/8/1999), hereinafter Hind.**
- 34. Regarding dependent claim 6,** it is similar to claim 5 except that it is based on claim 4 rather than claim 3, and it is rejected under similar rationale.
- 35. Regarding dependent claim 20,** the limitations of the claim are directed to an apparatus that operates in reverse of the apparatus of claim 5, and is rejected under similar rationale in the manner of claim 17.
- 36. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher, further in view of Motoyama et al. (USPN 5,504,891—filing date 6/13/1994), hereinafter Motoyama, further in view of Goodman (USPN 5,999,929—filing date 9/29/1997).**
- 37. Regarding dependent claim 7,** Fisher fails to disclose an apparatus further comprising: a tag list holding unit for holding a tag list in which tags are listed in a predetermined order for definition of a predetermined data structured; a tag rearranging unit for rearranging tags in said structured document before compression, in the predetermined order according to the tag list held in said tag list holding unit. However, Motoyama discloses in col. 18, lines 10-35 the use of a list to hold and rearrange a list of tags. It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a list to hold and rearrange tags because this would have permitted a combination with Fisher that would have greater flexibility in the storage order of tags. Fisher further fails to disclose an omitted-tag supplementing unit for supplementing a tag omitted in said

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structured document according to said tag list held in said tag list holding unit. However, Goodman discloses in col. 4, lines 25-60 facilities for providing missing tags in structured documents in order to allow successful display in Web browsers. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide Goodman's feature of supplementing missing tags to Fisher in order to allow successful display in Web browsers.

**38. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koontz,**

**further in view of Fisher, further in view of Motoyama, further in view of Goodman.**

**39. Regarding dependent claim 8,** it is similar to claim 7 except that it is based on claim 4 rather than claim 3, and it is rejected under similar rationale.

**40. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher,**

**further in view of Motoyama, further in view of Goodman, further in view of Hind.**

**41. Regarding dependent claim 9,** it is similar to claim 7, except that attributes are listed as in Hind. It would have been obvious to one of ordinary skill in the art at the time of the invention to add attributes on to the tag list because these are key features of a structured document and it was notoriously well known in the art at the time of the invention that key features of a document may be grouped together to increase storage efficiency.

Based on this observation, the overall claim is rejected in a manner similar to claim 7.

**42. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koontz,**

**further in view of Fisher, further in view of Motoyama, further in view of Goodman, further in view of Hind.**

43. **Regarding dependent claim 10**, it is similar to claim 9 except that it is based on claim 6 rather than claim 5, and it is rejected under similar rationale.
44. **Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koontz, further in view of Fisher, further in view of Arnold, further in view of Hind.**
45. **Regarding dependent claim 21**, it is similar to claim 20 except that it is based on claim 19 rather than claim 18, and it is rejected under similar rationale.
46. **Claims 31 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koontz, further in view of Fisher, further in view of Morel et al. (USPN 5,572,731—filing date 6/29/1993), hereinafter Morel.**
47. **Regarding dependent claim 31**, Koontz and Fisher disclose a tag-list-group holding unit for holding a plurality of tag lists corresponding to data structures of structured documents that can possibly be processed (such a unit is inherently necessary to hold the tag lists while they are being processed during compression/decompression), but they fail to disclose a tag list managing unit for managing correspondence between compressed document generated by said structured document compressing apparatus and said tag lists held in said tag-list-group-holding units. However, Morel, in the Abstract, lines 1-10, describes a sequencing unit that manages links between objects in order to follow sequences of semantic objects. It would have been obvious to one of ordinary skill in the art at the time of the invention to manage links as per Morel in the context of Koontz and Fisher between objects in order to follow sequences of semantic objects (see Morel, Abstract, line 8).

48. **Regarding dependent claim 35**, Koontz and Fisher fail to disclose that said tag-list-group holding unit is provided on a management server, which is communicably connected with said structured document compressing apparatus and with said structured document decompressing apparatus via a network, and a tag list necessary for the processing is read from said tag-list-group holding unit on said management server. However, it was notoriously well known in the art at the time of the invention that data used for processing can be stored on a server to permit remote access of data which is centrally stored for greater reliability and security. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a server to store the key compression data in Koontz and Fisher because it would have permitted remote access of data that is centrally stored for greater reliability and security.
49. **Claims 32 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koontz, further in view of Fisher, further in view of Arnold, further in view of Morel.**
50. **Regarding dependent claim 32**, it is similar to claim 31 except that it is based on claim 30 rather than claim 29, and it is rejected under similar rationale.
51. **Regarding dependent claim 36**, it is similar to claim 35 except that it is based on claim 32 rather than claim 31, and it is rejected under similar rationale.
52. **Claims 33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koontz, further in view of Fisher, further in view of Tuniman et al. (USPN 6,507,874 B1—filing date 6/30/1998), hereinafter Tuniman.**

53. **Regarding dependent claim 33**, Koontz and Fisher disclose a tag-list-group holding unit for holding a plurality of tag lists corresponding to data structures of structured documents that can possibly be processed (such a unit is inherently necessary to hold the tag lists while they are being processed during compression/decompression), and said structured document decompressing apparatus decompressing said compressed document using said tag list that corresponds to said tag-list identification information obtained by said tag-list identification information obtaining unit (this step would be an inherent logical step in decompressing in a manner which reverses the compression process) but they fail to disclose a tag-list identification information adding unit for adding tag-list identification information, which identifies a tag list that corresponds to a compressed document generated by said structured document compressing apparatus, to said compressed document; and a tag-list identification information obtaining unit for obtaining said tag-list identification information added to said compressed document. However, Tuniman, in col. 12, lines 35-60, describes the use and management of identification information in conjunction with lists to allow successful routing. It would have been obvious to one of ordinary skill in the art at the time of the invention to use add and obtain identification information in the manner of Tuniman in the context of Koontz and Fisher in order to allow successful routing of the list information.
54. **Regarding dependent claim 37**, it is similar to claim 35 except that it is based on claim 33 rather than claim 31, and it is rejected under similar rationale.



**55. Claims 34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koontz, further in view of Fisher, further in view of Arnold, further in view of Tuniman.**

**56. Regarding dependent claim 34,** it is similar to claim 31 except that it is based on claim 30 rather than claim 29, and it is rejected under similar rationale.

**57. Regarding dependent claim 38,** it is similar to claim 35 except that it is based on claim 34 rather than claim 31, and it is rejected under similar rationale.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 5,963,743 (filing date 8/29/1997)—Amberg et al.

USPN 6,330,530 (filing date 10/18/1999)—Horiguchi et al.

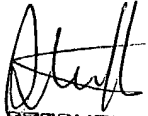
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan D. Schlaifer whose telephone number is 703-305-9777.

The examiner can normally be reached on 8:30-5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on 703-308-5465. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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STEPHEN S. HONG  
PRIMARY EXAMINER

JS